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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/539,014	06/16/2005	David Yen-Lung Chung	2003B133D	7413

23455 7590 11/01/2007  
EXXONMOBIL CHEMICAL COMPANY  
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EXAMINER
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RABAGO, ROBERTO

ART UNIT	PAPER NUMBER
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1796

MAIL DATE	DELIVERY MODE
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11/01/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

10/539,014

**Applicant(s)**

CHUNG ET AL.

**Examiner**

Roberto Rábago

**Art Unit**

1796

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 02 August 2007.
- 2a) ☒ This action is **FINAL**.      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-88 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-88 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                        | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date. _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

1. The amendment filed 8/2/2007 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: the definition of **F** has been changed in each of three locations. In the specification as originally filed, the triad fraction is repeatedly described two different ways: alkylstyrene-isoolefin-alkylstyrene, and isoolefin-alkylstyrene-isoolefin. In the formula for **F** and its associated range value for **m**, however, only the alkylstyrene-isoolefin-alkylstyrene triad has been disclosed. None of the locations cited by applicants as supporting the amendment to the specification disclose isoolefin-alkylstyrene-isoolefin as a component of the relationship for **F** and its associated range value for **m**. Paragraph [00211] appears to be relevant to this issue; however, close inspection reveals that this paragraph discloses an **A** component comprising isoprene and isobutylene (i.e., no alkylstyrene is mentioned), and therefore this paragraph is not relevant to the claimed invention because this **F** relationship is not the one set forth in the claims. In sum, given that the newly described triad was not previously disclosed as part of the **F** relationship and range value for **m**, it cannot be concluded that one of ordinary skill in the art would recognize that an error had been made, or that it should be corrected in the manner asserted by applicants.

Applicant is required to cancel the new matter in the reply to this Office Action.

***Claim Rejections - 35 USC § 112***

2. Claims 1-88 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. No description of the newly described triad fraction has been disclosed in the specification as originally filed as a component of the relationship for *F*, for the reasons discussed in item 1 above.

***Claim Rejections - 35 USC § 112***

3. Claims 71-83, 85 and 88 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The amendment to claim 71 (and claims 72-83, 85 and 88 as dependent thereon) has rendered the claimed scope indefinite because the claim now requires the parent copolymer to be represented by the drawn formula. However, it is not understood how the drawn formula, showing a para-substituted phenyl group with squiggly lines attached, represents a polymer of any sort. Furthermore, it is not understood how the drawn fragment represents a copolymer comprising an isoolefin as a required component.

***Claim Rejections - 35 USC § 102 and/or 103***

4. Claims 1-11, 84 and 86 are rejected under 35 U.S.C. 102(b) as being anticipated by Powers et al. (US 5,162,445) for the reasons set forth in item 7 of the Office action mailed 5/2/2007.

Applicant's arguments filed 8/2/2007 have been fully considered but they are not persuasive. Applicants argue that the method disclosed in the specification results in polymers which are "measurably different and distinct." However, this argument essentially ignores the foundation of the rejection, which is based on the established trend that the m value is a function of the pMS fraction in the polymer, even in conventional solvents such as those shown in the reference. Since the reference discloses polymers within the pMS range expected to produce the required values of m, basis was established to conclude that the unreported values are inherently present, and the burden of proof was shifted to applicants to show otherwise. In response, applicants have neither addressed the central contention of the rejection nor disputed the shifting of burden of proof.

5. Claims 12-64, 67-70 and 87 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Powers et al. (US 5,162,445) for the reasons set forth in item 8 of the Office action mailed 5/2/2007.

Applicant's arguments filed 8/2/2007 have been fully considered but they are not persuasive. Applicants argue that the use of the specified diluents results in "measurable differences." However, as stated above, applicants have not addressed

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the basis of the examiner's contention that the reference polymers have the claimed structural properties. Furthermore, applicants' argument is limited to a discussion of %BSB as a result of diluent change, but has not identified any polymer properties which would necessarily be absent in the scope of polymers disclosed in the reference as a result of the difference in diluent selection. Accordingly, there is no basis to conclude that the reference polymers are outside the broad scope of polymers set forth as product-by-process.

6. Claims 71-83, 85 and 88 are rejected under 35 U.S.C. 103(a) as being unpatentable over Powers et al. (US 5,162,445) for the reasons set forth in item 9 of the Office action mailed 5/2/2007.

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

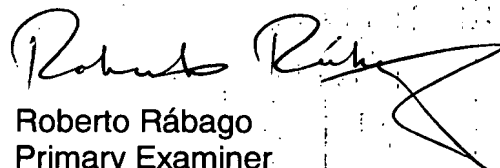
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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Roberto Rábago whose telephone number is (571) 272-1109. The examiner can normally be reached on Monday - Friday from 8:00 - 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Roberto Rábago  
Primary Examiner  
Art Unit 1796

RR  
October 28, 2007